

March 18, 1952

Dr. Charlotte A. Colwell
Research Bacteriologist
Veterans Administration Hospital
Hines, Illinois

Dear Dr. Colwell:

Recently, I tried to repeat experiments on the effect of methyl-naphthaquinone as reported in your paper in J. Bact., October 1946. I tried the K-12 strain of E. coli (used in my other genetic work) and looked for the small colony variants. I had no difficulty in observing the pronounced bactericidal effects at low concentrations (.0015 - .002%) in synthetic medium, but did not find the small colony variants in platings on nutrient agar.

It might take some time to trace down the immediate cause of this discrepant result, and perhaps it cannot be done at all with my strain. Would you still be able and willing to provide cultures of a proven susceptible strain and its dwarf variant? This would be very helpful in orienting my experiments to a more compatible conclusion.

I should perhaps indicate the basis of my interest. I should like, first of all, to look into the question of the selective versus the inductive action of the quinone. Secondly, there may be a relationship between the small colony variants (if they are indeed induced) and the acriflavine-induced "petites" forms of yeast, described by Ephrussi. These are of great genetic interest.

Yours sincerely,

Joshua Lederberg
Associate Professor of Genetics